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Other Defense Work

It Also Has Civilian Products That Rule Small Roosts; Its Earnings Keep Rising

But Who Ever Heard of It?

By Bob Davis

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NEVADA TEST SITE—Deep in the Nevada desert, the United States is preparing for a Soviet nuclear attack in space. EG&G Inc. is doing the work.

EG&G miners are burrowing a mile deep into a volcanic-rock mesa to lay a huge steel pipe. Next spring, they will encase the pipe in concrete and suck it free of air to resemble the vacuum of outer space. Then, EG&G technicians will fire a nuclear weapon inside, obliterating part of the tunnel and battering delicate sensors with radiation. From this test, weapons scientists will try to gauge how well U.S. satellites and space-bound missiles would withstand a nuclear blast.

EG&G is the bomb company. Since the nuclear era began, EG&G has helped manage all but eight of the approximately 745 announced U.S. nuclear detonations. It fired the first U.S. hydrogen bomb, pulverizing a small Pacific island called Elugelab. It collected data on a nuclear rocket-burst that turned the sky green over Johnston atoll, also in the Pacific.

Current Work

These days, EG&G is testing warheads for a new generation of missiles. It has built experimental silos for the MX. It researches ways to track nuclear submarines. It builds components for nuclear-weapons systems. And whether the U.S. keeps pace with or falls behind the Soviet Union in the nuclear arms race depends, in part, on EG&G.

In addition, the company has sizable commercial operations. Its 122 specialized commercial product lines and services include businesses ranging from making amplifiers used in research projects to testing auto emissions and possible cures for cancer.

EG&G also makes money—consistently. Earnings have increased every year since 1970, even during the 1974-75 recession, when many government contractors suffered. Last year, net income reached a record $16.6 million on sales of $904.2 million.

Even so, EG&G is the most anonymous [illegible] because of its super-secret research. Its headquarters is tucked away unmarked by a sign, in a squat office building in Wellesley, Mass. And John M. Kucharski, a senior vice president, says that until recently even his kids couldn't figure out what [illegible] for a living.

Baffled Analysts

[illegible] street. Understanding the company requires an effort beyond many securities analysts because its government work is sometimes classified and its commercial work is fractured into tiny markets. "Analysts clutch their throats and run from the room when you mention EG&G," says Nancy B. Tooke, a vice president at E.F. Hutton & Co.

Even many antinuclear activists say they never heard of it. Jean Holladay, a Newton, Mass., grandmother, spent 2½ months in jail for pouring blood on documents inside a factory that makes MX missile parts. But although EG&G is headquartered just a few miles from her home, she asks: "Are they in Massachusetts?"

EG&G got off the starting blocks in the nuclear race when one of its founders, Harold E. Edgerton, designed circuitry that was adapted for the atomic bomb that flattened Nagasaki. After the war, the government asked Herbert E. Grier, who together with Mr. Edgerton and Kenneth J. Germeshausen had formed a company around their initials, to fire three atomic bombs at the Eniwetok atoll in the Pacific.

None of the founders remains active in the company, but EG&G's first employee, Bernard J. O'Keefe, now is chairman. As a young Navy engineer, Mr. O'Keefe handwired parts of the Nagasaki bomb. Since working for EG&G, he has been involved in about 200 nuclear-weapons tests, often announcing the last few seconds of a countdown. The work has sometimes been dangerous. Once, a hydrogen-bomb explosion in the Pacific blanketed his bunker with radioactive fallout, he says.

Weapons Foe

Despite his work, Mr. O'Keefe says he shares the concerns of antinuclear protesters. In his book, "Nuclear Hostages," he calls the United States and the Soviet Union "superpawns" to the arms race and opposes a raft of weapons systems—the neutron bomb, the MX missile, nuclear missiles for Europe—that his company helped develop. But Mr. O'Keefe says he won't lobby his friends in the Pentagon or on Capitol Hill to stop work on nuclear weapons.

"I'm in the system," he declares. "I'm a card-carrying member of the military-industrial complex."

That hasn't won him admirers among antinuclear activists. Warren Davis, a founder of High Technology Professionals for Peace in Cambridge, Mass., calls Mr. O'Keefe "amoral" and charges that "greed" is behind his willingness to work on weapons he opposes. Mr. O'Keefe counters that he doesn't make defense policy and, besides, "when the budget comes through, you take off your citizen hat and fight for as much of that budget as possible."

And Mr. O'Keefe wins plenty. The son of a Providence, R.I., politician, Mr. O'Keefe says he grew up "not knowing a Republican or a Protestant," but now he boasts of his contacts in both political parties.

President Carter offered to make him the first chairman of the Synthetic Fuels [illegible]. He declined, he says, because he thought Ronald Reagan would be elected and President-elect Reagan appointed him to a transition committee. But he says he doesn't need to arm-twist to get contracts. "The politicians can't touch me," he exclaims.

When it comes to profiting from changes in government policy, few businessmen can touch him, either. In 1965, when the government was exploring commercial uses for nuclear bombs, EG&G planned to stimulate natural-gas production in the West through underground nuclear detonations that would release trapped gas. The project excited Wall Street, and by 1967, EG&G's stock price mushroomed to 79 times earnings. Eager to diversify out of government work, Mr. O'Keefe traded EG&G shares for several scientific-instrument and mechanical-parts companies.

The citizens of Colorado objected to plans to explode 1,000 nuclear bombs beneath their state, though, and the project collapsed in 1974 as a result of a referendum. But by then, EG&G's commercial operations had become among its most profitable.

Now, EG&G is awaiting the government's plans to build space-based weapons systems and a manned space station. Both would use nuclear-power sources, Mr. Kucharski believes, and would require the kind of safety and testing programs in which EG&G excels.

EG&G competes commercially only in small markets that it can dominate. About 40% of its sales now come from technical services and such products as precision fans, optical components and radiation detectors that don't have enough sales potential to attract many competitors. EG&G says it is either the market-share leader or performance leader in about 80% of these technological markets, which have average world-wide sales of less than $25 million.

Its research work, meanwhile, ranges from one laboratory in San Antonio, Texas, that tests automobiles for pollution and safety, to another in Worcester, Mass., that evaluates anticancer drugs and studies the effects of marijuana.

Avoiding Risks

EG&G avoids financial risks, perhaps because it deals in deadly weapons, perhaps because of the conservative outlook of 61-year-old Mr. O'Keefe and his successor as chief executive, Dean W. Freed. Personally, the men are opposites, and they concede that they aren't close friends. Chubby, balding, an indifferent dresser, Mr. O'Keefe enjoys regaling politicians. Tall, elegant, natty tailored, Mr. Freed stiffly proclaims that his hobby is "joining organizations in a leadership position." But both men look for sure bets before they invest EG&G money.

The company's "wish list" of 90 acquisition prospects is kept in a black loose-leaf notebook. Reaching for it, David J. Beaubien, senior vice president, comments: "You wouldn't know these companies even if I told you their names."

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Right now, Mr. [redacted] willing to spe[redacted] right company. But he concedes that [redacted] has been hunting for such a company—one in an insulated market—for about eight years. One that got away: an outfit that raises laboratory mice.

Government Business

For all its commercial enterprises, though, EG&G's fastest-growing business is in government contracts. Since President Reagan took office and began beefing up the nation's defense and research-and-development budgets, EG&G's pretax operating profit from government contracts has doubled. Last year, EG&G helped persuade the Department of Energy to increase fees about 40% for managing the Nevada Test Site and a nuclear-power program in Idaho. It also added the Kennedy Space Center to the portfolio of huge projects that it runs for the government. EG&G engineers test components used in the Space Shuttle before it is launched, load it with fuel and manage the base during missions.

EG&G doesn't win all the contracts for which it competes, of course. For instance, [redacted] weapons and research facilities in Oak Ridge, Tenn.

The sprawling Nevada Test Site, in the rocky desert 65 miles north of Las Vegas, remains the heart of the company. EG&G honed its management skills here and has kept current with nuclear technology through its weapons work. Now it employs about 7,000 workers in Nevada—about one-third of its world-wide force—in tasks as demanding as measuring the radioactive particles released by nuclear explosions and as mundane as operating cafeterias.

Scarred Desert

The desert here bears the scars of the weapons program. Hundreds of craters, one the size of a vast rock quarry, mark the sites of underground nuclear tests, which are proceeding now at a clip of about 15 a year. Two homes sit alone on flatland dotted with desert shrubs, all that remain of a model village flattened by a bomb.

Last week, a federal district judge ruled that fallout from atmospheric tests caused nine cancer deaths in areas near the Nevada Test Site and held the government guilty of negligence. EG&G wasn't a defendant in that case, but its Reynolds Electrical & Engineering subsidiary is a defendant in several other cases brought by former test-site workers who contend that they contracted cancer as a result of the blasts. EG&G didn't own Reynolds at the time of the above-ground testing and says the government would indemnify it for any judgment.)

In the early years of the nuclear program, when EG&G ran atmospheric tests, hikers would climb into the nearby mountains to watch explosions that turned the night sky into day. But today's underground blasts lack that drama. The ground rumbles then collapses. Occasionally, a coyote wandering too close is upended.

Deep in Politics

The work in Nevada is subject to politics. All three Democratic candidates for the presidency favor a treaty to ban nuclear testing, but the prospect of a halt doesn't appear to trouble EG&G. During the last nuclear moratorium in 1958, the government employed EG&G to help develop a nuclear-powered rocket, Mr. O'Keefe recalls. To stay current with nuclear technology, the government, he figures, would have to find work for EG&G during any future test ban, too. One possibility: testing nuclear weapons through computer simulations and other means.

Not all of EG&G's Nevada efforts go into detonating weapons. About 150 people are part of the Department of Energy's elite Nuclear Emergency Search Team, which responds to extortion threats involving nuclear weapons. When a Long Beach, Calif., oil company received a $100,000 extortion demand—backed up by the threat of a nuclear explosion—EG&G searched the area for signs of radioactivity and helped determine that it was a hoax.

The [redacted] team operates 10 air-[redacted] radiation from over-[redacted]d. And to survey an area on foot, EG&G uses cameras hidden in Marlboro cartons and radiation detectors bundled in backpacks. "We've gotten away from attache cases because our employees don't look like they carry them," notes Peter H. Zavattaro, who heads EG&G's energy measurement operations.

Work Elsewhere

Other EG&G government work is spread throughout the country. Outside Washington, D.C., EG&G scientists devise sonar recording techniques to locate enemy submarines and develop radar systems to detect low-flying missiles. In Albuquerque, N.M., EG&G technicians drive tanks and airplanes under an antenna net that produces an electromagnetic pulse of energy similar to a nuclear bomb to see how they function afterwards.

And in Idaho, on a vast tract of federal land traversed by antelope, EG&G operates six experimental reactors for the government. To gauge the radioactivity released in a meltdown, EG&G intends to heat the fuel cores in two reactors to a point where their metal shieldings burn. Information from these tests will then be used to evaluate reactor-safety features.

EG&G executives talk of a host of next-generation projects: a nuclear-power plant with sophisticated safety features, a furnace that melts low-level radioactive waste into ingots, an underground repository for spent fuel cores. "My fundamental philosophy is that nuclear won't go away," Mr. O'Keefe says. As long as it doesn't, EG&G should prosper.

EG&G: A Nuclear-Weapons Giant

	1984	1983	Change
Sales (in millions)	$[redacted]	$608.9	+12
Net Income (in millions)	$[redacted]	$39.9	+[redacted]
Earnings per Share	$1.56	$1.36	+15
Total Assets (in millions)	$[redacted]	$[redacted]	+23
Shareholders' Equity (in millions)	$[redacted]	$[redacted]	+22
Employees	20,000	16,000	
Stock Price	May 15, 1984	$[redacted] per share	
	May 15, 1983	$[redacted] per share	

First Quarter, April 1	1984	1983	Change
Sales (in millions)	$246.9	$207.1	+19
Net Income (in millions)	$[redacted]	$10.6	+10
Earnings per Share	$[redacted]	$0.[redacted]	+[redacted]